Appendix to the Report of the Kew Committee for the Year ending December 31, 1890.

MAGNETICAL AND METEOROLOGICAL OBSERVATIONS,

Made at the Kew Observatory, Richmond, Lat. 51° 28′ 6″ N. and Long. $0^h\ 1^m\ 15^s{\cdot}1$ W., height 34 feet above mean sea-level, for the year 1890.

The results given in the following tables are deduced from the magnetograph curves which have been standardised by observations of deflection and vibration. These were made with the Collimator Magnet K.C. 1. and the Declinometer Magnets marked N.E. and K.O. 90 in the 9-inch Unifilar Magnetometer by Jones.

The Inclination was observed with the Inclinometer by Barrow, No. 33, and needles 1 and 2, which are $3\frac{1}{2}$ inches in length.

The Declination and Force values given in Tables I to VI are prepared in accordance with the suggestions made in the fifth report of the Committee of the British Association on comparing and reducing Magnetic Observations.

The following is a list of the days during the year 1890 which were selected by the Astronomer Royal, as suitable for the determination of the magnetic diurnal variations, and which have been employed in the preparation of the magnetic tables.

January	5, 7, 12, 30, 31.
February	2, 7, 10, 23, 25.
March	2, 3, 9, 29, 30.
April	3, 9, 18, 25, 28.
May	1, 13, 16, 22, 29.
June	6, 10, 15, 24, 30.
July	3, 9, 14, 28, 29.
August	4, 12, 13, 28, 30.
September	8, 9, 23, 27, 28.
October	4, 7, 21, 28, 29.
November	3, 6, 11, 24, 29.
December	3, 7, 12, 14, 26.

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Table I.—Hourly Means of Declination at the Kew Observatory, Richmond, as (17° + West). Month during

Hours	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
					Winter.						
1890. Months.	′	′	′	′	′	′	′	′	′	′	′
January	52.5	53·1	53·1	52·8	52·6	52·6	52·7	52·3	52·3	52·8	53·6
February....	52·3	52·5	52·9	53·0	52·7	52·4	52·2	51·3	50·8	51·3	52·9
March.....	51·7	52·0	51·2	51·1	51·4	50·8	50·4	49·8	49·8	51·5	54·5
October	48·4	48·4	48·1	48·2	48·2	47·8	47·0	46·4	46·0	47·7	50·1
November ..	47·4	47·5	47·7	47·6	47·5	47·2	47·0	46·8	47·1	48·3	50·0
December ..	46·5	47·0	47·0	46·8	46·9	46·7	46·4	46·1	46·2	47·2	48·0
Mean....	49·8	50·1	50·0	49·9	49·9	49·6	49·3	48·8	48·7	49·8	51·5
					Summer.						
	′	′	′	′	′	′	′	′	′	′	′
April	51·4	51·3	51·2	50·7	50·0	49·7	48·5	47·9	48·5	51·0	54·2
May.....	50·9	50·5	50·2	49·4	48·4	48·1	47·8	48·1	49·3	52·0	54·6
June.....	50·9	50·7	50·1	49·4	48·2	47·2	47·2	47·0	48·1	50·3	52·6
July.....	50·8	50·8	50·3	49·5	48·4	47·7	47·4	47·7	49·2	50·7	52·7
August.....	49·7	49·5	49·2	48·9	48·1	47·4	47·1	47·2	48·8	51·3	54·4
September ..	48·1	47·9	47·4	47·3	47·2	47·1	46·4	46·6	47·8	49·8	51·5
Mean....	50·3	50·1	49·7	49·2	48·4	47·9	47·4	47·4	48·6	50·9	53·3

Table II.—Solar Diurnal Range of the Kew

Hours..	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
					Summer Mean.						
	′	′	′	′	′	′	′	′	′	′	′
	−0·6	−0·8	−1·2	−1·7	−2·5	−3·0	−3·5	−3·5	−2·3	−0·0	+2·4
					Winter Mean.						
	′	′	′	′	′	′	′	′	′	′	′
	−0·5	−0·2	−0·3	−0·4	−0·4	−0·7	−1·0	−1·5	−1·6	−0·5	+1·2
					Annual Mean.						
	′	′	′	′	′	′	′	′	′	′	′
	−0·6	−0·5	−0·8	−1·0	−1·5	−1·9	−2·2	−2·5	−2·0	−0·3	+1·8

NOTE.—When the sign is + the magnet

determined from the Magnetograph Curves on Five selected quiet Days in each the Year 1890.

Noon.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Mid.
					Winter.							
′	′	′	′	′	′	′	′	′	′	′	′	′
55·3	56·2	55·2	54·4	54·0	53·6	53·2	53·0	52·5	52·2	52·2	52·2	52·3
54·7	55·7	56·0	55·2	54·1	53·3	53·0	52·8	52·2	51·8	51·8	51·4	51·1
56·4	57·3	56·6	54·9	52·7	52·0	51·9	51·7	51·9	51·8	51·8	51·7	51·7
52·1	52·7	52·1	51·1	49·7	49·3	49·0	48·8	48·3	47·1	46·9	47·1	47·6
51·6	51·7	50·2	49·1	48·4	48·0	47·9	47·8	47·5	47·4	47·1	47·3	47·5
48·7	49·0	48·7	47·8	47·1	46·7	46·5	46·5	45·9	45·2	45·4	45·3	45·7
53·1	53·8	53·1	52·1	51·0	50·5	50·3	50·1	49·7	49·3	49·2	49·2	49·3
					Summer.							
′	′	′	′	′	′	′	′	′	′	′	′	′
57·0	57·8	56·5	55·0	53·5	52·3	51·9	51·6	51·2	51·7	51·5	51·5	51·1
56·1	56·1	55·5	54·0	52·6	51·6	51·2	50·9	50·9	51·1	51·2	51·3	51·0
54·7	55·6	55·6	55·1	53·9	52·7	52·0	51·4	51·2	51·0	51·1	50·7	50·4
55·2	56·6	56·5	54·9	53·2	51·5	50·8	51·2	51·3	51·4	51·3	51·0	50·5
56·5	56·8	55·4	53·4	51·6	50·4	50·3	50·3	50·4	50·3	50·2	49·9	49·5
53·3	53·7	52·4	50·5	49·7	49·5	49·3	49·3	49·0	49·0	48·7	48·5	48·2
55·5	56·1	55·3	53·8	52·4	51·3	50·9	50·8	50·7	50·8	50·7	50·5	50·1

Declination as derived from Table I.

Noon.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Mid.
					Summer Mean.							
′	′	′	′	′	′	′	′	′	′	′	′	′
+4·6	+5·2	+4·4	+2·9	+1·5	+0·4	0·0	−0·1	−0·2	−0·1	−0·2	−0·4	−0·8
					Winter Mean.							
′	′	′	′	′	′	′	′	′	′	′	′	′
+2·8	+3·5	+2·8	+1·8	+0·7	+0·2	0·0	−0·2	−0·6	−1·0	−1·1	−1·1	−1·0
					Annual Mean.							
′	′	′	′	′	′	′	′	′	′	′	′	′
+3·7	+4·4	+3·6	+2·4	+1·1	+0·3	0·0	−0·2	−0·4	−0·6	−0·7	−0·8	−0·9

points to the west of its mean position.

Table III.—Hourly Means of the Horizontal Force at the Kew Observatory, Temperature) on Five selected quiet 0·18000 + (C.G.S. units).

Hours	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
					Winter.						
1890. Months.											
January	166	164	166	168	171	172	173	171	167	162	160
February....	168	168	169	171	173	173	174	172	168	162	160
March	173	174	174	173	176	176	175	171	166	158	158
October	168	170	170	171	171	171	168	164	155	150	147
November ..	165	164	166	167	170	170	170	168	164	159	160
December ..	165	165	167	170	172	171	172	171	167	162	161
Mean	168	168	169	170	172	172	172	170	165	159	158
					Summer.						
April	180	178	179	180	180	178	177	169	159	154	158
May.....	187	184	183	181	180	176	173	166	165	165	171
June.....	186	185	184	182	181	175	170	166	165	163	164
July.....	180	178	180	178	177	175	168	162	158	157	162
August.....	175	176	176	175	173	169	163	156	151	152	157
September ..	174	171	172	171	170	166	163	158	150	150	154
Mean	180	179	179	178	177	173	169	163	158	157	161

(C.G.S. units). Table IV.—Diurnal Range of the Kew

Hours ...	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
					Summer mean.						
	+ ·00004	+ ·00003	+ ·00003	+ ·00002	+ ·00001	− ·00003	− ·00007	− ·00013	− ·00018	− ·00019	− ·00015
					Winter mean.						
	·00000	·00000	+ ·00001	+ ·00002	+ ·00004	+ ·00004	+ ·00004	+ ·00002	− ·00003	− ·00009	− ·00010
					Annual mean.						
	+ ·00002	+ ·00002	+ ·00002	+ ·00002	+ ·00003	+ ·00001	− ·00002	− ·00006	− ·00011	− ·00014	− ·00012

NOTE.—When the sign is + the

Richmond, as determined from the Magnetograph Curves (corrected for Days in each Month during the Year 1890.

Noon.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Mid.
					Winter.							
159	164	166	167	167	167	167	167	167	166	165	165	166
160	162	167	169	170	172	172	174	174	175	174	173	174
163	168	173	175	173	173	174	176	175	176	176	175	174
151	157	160	165	164	170	171	172	169	169	169	170	169
162	165	169	169	168	171	171	171	169	168	167	168	170
164	168	169	170	168	166	162	163	160	160	160	164	164
160	164	167	169	168	170	170	171	169	169	169	169	170
					Summer.							
166	172	177	181	181	183	182	187	184	185	184	184	184
177	181	185	180	182	186	191	196	193	190	190	193	191
170	177	182	188	184	185	196	195	193	191	186	183	184
171	177	185	189	189	187	187	189	189	188	186	183	180
166	175	179	177	178	176	180	184	182	182	181	180	179
164	168	171	166	168	170	172	171	172	174	171	174	173
169	175	180	180	180	181	185	187	186	185	183	183	182

Horizontal Force as deduced from Table III.

Noon.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Mid.
					Summer mean.							
− ·00007	− ·00001	+ ·00004	+ ·00004	+ ·00004	+ ·00005	+ ·00009	+ ·00011	+ ·00010	+ ·00009	+ ·00007	+ ·00007	+ ·00006
					Winter mean.							
− ·00008	− ·00004	− ·00001	+ ·00001	·00000	+ ·00002	+ ·00002	+ ·00003	+ ·00001	+ ·00001	+ ·00001	+ ·00001	+ ·00002
					Annual mean.							
− ·00008	− ·00002	+ ·00001	+ ·00003	+ ·00002	+ ·00004	+ ·00006	+ ·00007	+ ·00006	+ ·00005	+ ·00004	+ ·00004	+ ·00004

reading is above the mean.

Table V.—Hourly Means of the Vertical Force (corrected for Temperature) at the the Five selected quiet Days in each

0·43000 + (C.G.S. units).

Hours	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1890. Months.											
January	972	971	971	971	971	971	972	972	973	970	970
February....	958	957	958	959	960	960	961	962	962	959	956
March.....	942	943	943	945	947	948	950	951	949	945	941
April	945	946	946	947	949	950	952	950	946	940	935
May.....	969	969	969	971	973	972	971	965	962	958	954
June	969	970	969	972	973	970	967	964	958	953	951
July.....	956	956	956	957	958	957	958	956	954	945	940
August.....	936	937	937	938	940	941	941	940	935	933	930
September ..	935	936	936	938	938	940	940	940	936	933	931
October	929	929	929	930	930	930	930	931	931	929	925
November ..	—	—	—	—	—	—	—	—	—	—	—
December ...	—	—	—	—	—	—	—	—	—	—	—

NOTE.—During a part of November and December the action

Table VI.—Hourly Means of the Inclination at the Kew Observatory, Five selected quiet

67° +

Hours	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1890. Months.	′	′	′	′	′	′	′	′		′	′
January	33·2	33·3	33·2	33·0	32·8	32·8	32·7	32·9	33·2	33·4	33·5
February....	32·7	32·6	32·6	32·5	32·4	32·4	32·4	32·5	32·8	33·1	33·1
March.....	31·9	31·9	31·9	32·0	31·8	31·9	32·0	32·3	32·6	33·0	32·9
April	31·5	31·7	31·6	31·6	31·6	31·8	31·9	32·4	32·9	33·1	32·7
May.....	31·7	31·9	32·0	32·2	32·3	32·5	32·7	33·0	33·0	32·9	32·4
June	31·8	31·9	31 9	32·1	32·2	32·5	32·8	33·0	32·9	32·9	32·8
July.....	31·8	32·0	31·8	32·0	32·1	32·2	32·7	33·0	33·2	33·1	32·6
August	31·6	31·6	31·6	31·6	31·8	32·1	32·5	33·0	33·2	33·0	32·6
September ..	31·6	31·9	31·8	31·9	32·0	32·3	32·5	32·8	33·3	33·2	32·9
October	31·7	31·8	31·8	31·9	32·0	32·2	32·5	32·9	33·1	33·0	32·7
November...	—	—	—	—	—	—	—	—	—	—	—
December...	—	—	—	—	—	—	—	—	—	—	—

NOTE.—Owing to the doubtful action of the vertical force magnetometer during a part of observed mean values on Nov. 24, 25 and Dec. 22, 24 are inserted in italics.

Kew Observatory, Richmond, as determined from the Magnetograph Curves on Month during the Year 1890.

Noon.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Mid.
970	970	972	973	971	971	970	970	970	969	968	967	967
955	956	960	963	964	964	963	964	964	963	964	963	962
942	942	946	952	956	956	955	957	956	956	956	957	959
934	938	944	949	952	954	954	954	953	952	952	951	952
954	957	961	961	963	965	965	964	962	962	961	962	961
950	954	957	961	966	967	967	968	967	967	967	967	968
941	944	951	955	960	961	959	957	957	955	955	954	954
929	933	941	942	941	941	942	940	940	940	939	939	940
930	932	935	935	935	933	933	933	933	933	934	934	936
924	924	925	926	926	926	925	925	923	923	922	921	921
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

of the vertical force instrument was not satisfactory.

calculated from the Horizontal and Vertical Forces derived from the Days in each Month.

Noon.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Mid.
′	′	′	′	′	′	′	′	′	′	′	′	′
33·6	33·3	33·2	33·2	33·1	33·1	33·1	33·1	33·1	33·1	33·1	33·1	33·1
33·1	33·0	32·8	32·7	32·7	32·6	32·5	32·4	32·4	32·4	32·4	32·5	32·4
32·6	32·2	32·0	32·0	32·3	32·3	32·2	32·1	32·2	32·1	32·1	32·2	32·3
32·1	31·9	31·7	31·6	31·6	31·6	31·6	31·3	31·5	31·4	31·4	31·4	31·4
32·0	31·8	31·6	32·0	31·9	31·7	31·3	31·0	31·1	31·3	31·3	31·1	31·2
32·3	32·0	31·7	31·4	31·8	31·8	31·1	31·2	31·3	31·4	31·7	31·9	31·9
32·0	31·7	31·5	31·2	31·3	31·5	31·4	31·3	31·3	31·3	31·4	31·6	31·8
32·0	31·5	31·5	31·6	31·5	31·7	31·4	31·1	31·2	31·2	31·3	31·3	31·4
32·2	32·0	31·8	32·2	32·0	31·8	31·7	31·8	31·7	31·6	31·8	31·6	31·7
32·1	31·8	31·6	31·7	31·7	31·7	31·4	31·3	31·3	31·4	31·5	31·5	31·6
—	—	—	*32·2*	—	—	—	—	—	—	—	—	—
—	—	—	*31·7*	—	—	—	—	—	—	—	—	—

November and December, the inclination has not been calculated for those months, but the

APPENDIX II.—Table I.

Mean Monthly Results of Temperature and Pressure for Kew Observatory.
October, 1889, *to December*, 1890.

Months.	Thermometer.								Barometer.*					Mean vapour-tension.
	Mean.	Means of—			Absolute Extremes.				Mean.	Absolute Extremes.				
		Max.	Min.	Max. and Min.	Max.	Date.	Min.	Date.		Max.	Date.	Min.	Date.	
						d. h.		d. h.			d. h.		d. h.	
1889.									ins.	ins.		ins.		in.
Oct.....	48°2	54°3	42°4	48°4	59°1	16 1 P.M.	32°0	13 6 A.M.	29·702	30·231	25 11 P.M.	29·129	19 10 A.M.	·300
Nov.	44·4	49·3	39·1	44·2	57·1	15 2 „	29·3	30 Midt.	30·235	30·687	18 9 „	29·310	25 4 „	·260
Dec.	37·7	41·7	32·7	37·2	52·0	17 1 „	22·7	29 6 A.M.	30·208	30·668	5{8 „ 11 „	29·295	10 5 P.M.	·204
1890.														
Jan.....	43·8	48·3	38·6	43·5	54·1	25 2 P.M.	21·9	1 5 P.M.	29·948	30·480	29 11 P.M.	28·682	23 Noon	·246
Feb.	37·8	42·7	33·7	38·2	49·8	17 3 „	27·5	11 9 A.M.	30·209	30·720	23 11 A.M.	29·412	15 3 P.M.	·190
March..	43·3	49·7	36·4	43·1	64·2	28 2 „	18·3	4 7 „	29·854	30·513	3 11 „	29·164	16 5 „	·223
April...	45·5	53·0	38·7	45·9	62·7	30 1 „	30·8	5 6 „	29·836	30·395	1 9 „	29·271	25 9 A.M.	·229
May	54·1	62·8	44·7	53·8	73·4	24 2 „	37·9	3 4 „	29·846	30·331	22 8 „	29·377	11 5 „	·300
June...	57·9	66·3	50·4	58·4	75·7	25 4 „	38·3	1 4 „	30·013	30·418	15 9 „	29·183	30 7 P.M.	·371
July ...	59·4	66·8	52·5	59·7	74·3	23 5 „	44·0	12 4 „	29·916	30·265	20 11 „	29·206	1 3 A.M.	·389
Aug....	59·0	66·8	52·0	59·4	77·3	5 5 „	40·5	31 5 „	29·900	30·324	31 Midt.	29·389	27 1 P.M.	·383
Sept....	58·8	68·0	50·5	59·3	73·1	16 2 „	36·9	1 5 „	30·161	30·503	25 11 P.M.	29·597	21{9 „ 11 „	} ·394
Oct.....	48·9	56·8	41·7	49·3	66·2	4 2 „	25·5	28 7 „	30·116	30·552	22 10 „	29·406	26 1 „	·273
Nov.	43·4	48·6	37·0	42·8	58·3	23 5 „	21·5	{28 4 P.M. 30 9 A.M.}	29·885	30·512	20 10 A.M.	29·003	7 3 A.M.	·236
Dec.	30·0	33·4	25·3	29·4	43·8	4 Noon	10·8	22 8 P.M.	30·048	30·402	24 10 P.M.	29·232	19 7 „	·128
Yearly Means	48·5	55·3	41·8	48·6	..	....	..	....	29·978	..	....	..	....	·280

This Table is compiled from "Hourly Means," vols. 1889 and 1890, of the Meteorological Office.

* Reduced to 32° at M.S.L.

Meteorological Observations.—Table II.

Kew Observatory.

Months.	Mean amount of cloud (0=clear, 10=overcast).	Rainfall.*			Weather. Number of days on which were registered							Wind.† Number of days on which it was								
		Total.	Maximum.	Date.	Rain. ‡	Snow.	Hail.	Thunderstorms.	Clear sky.	Overcast sky.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
1889.		in.	in.																	
October	7·2	3·990	0·675	19	23	..	..	1	2	13	..	6	3	1	2	7	9	2	1	9
November ...	7·5	0·720	0·260	24	7	2	..	..	4	17	..	2	1	5	4	3	6	5	4	13
December ...	7·4	1·200	0·275	21	18	2	..	..	4	18	..	2	5	3	2	3	10	5	1	11
1890.																				
January	7·4	2·170	0·360	27	22	..	1	..	3	15	4	1	..	1	1	7	12	6	3	2
February	6·7	0·900	0·625	14	7	3	..	..	5	11	..	7	7	8	1	1	1	2	1	3
March	6·7	1·530	0·370	19	16	3	2	..	3	11	..	2	2	1	1	4	11	7	3	..
April	6·1	1·735	0·305	25	15	..	..	..	6	10	1	7	6	6	..	2	4	3	2	3
May	5·6	1·415	0·520	9	12	..	..	..	5	5	..	4	4	5	2	8	3	2	3	2
June	7·5	3·385	0·960	28	16	..	..	2	..	15	..	2	1	..	1	4	12	8	2	4
July	7·5	4·455	2·285	17	14	..	..	2	..	17	..	4	1	1	..	2	11	8	4	1
August	6·2	1·950	0·710	19	15	..	..	1	2	9	..	4	5	1	..	1	12	6	2	6
September...	5·2	0·585	0·220	17	7	..	1	1	8	9	..	1	1	2	5	5	8	5	3	7
October	5·3	1·025	0·295	25	16	..	..	..	10	9	..	1	1	..	..	3	12	7	7	11
November...	7·6	1·525	0·375	6	18	2	..	..	1	15	1	2	3	1	1	6	7	8	2	3
December ...	9·4	0·545	0·185	18	9	10	..	..	..	26	1	2	15	10	2	1	1	..	..	12
Totals and mean for 1890	6·8	21·220			167	18	4	6	43	152	7	37	46	36	14	44	94	62	32	54

* Measured at 10 A.M. daily by gauge 1·75 feet above ground.

† As registered by the anemograph.

‡ The number of rainy days are those on which 0·01 rain or melted snow were recorded.

Meteorological Observations.—Table III.

Kew Observatory.

Months.	Bright Sunshine.				Maximum temperature in sun's rays. (Black bulb *in vacuo*.)			Minimum temperature on the ground.			Horizontal movement of the air.*		
	Total number of hours recorded.	Mean percentage of possible sunshine.	Greatest daily record.	Date.	Mean.	Highest.	Date.	Mean.	Lowest.	Date. †	Average hourly velocity.	Greatest hourly velocity.	Date.
1889.	h. m.		h. m.		deg.	deg.		deg.	deg.		miles.	miles.	
October	83 18	25	7 36	12 31	93	112	10	37	30	10	8	31	7
November	42 6	26	7 30	2	71	104	1	33	19	27	7	30	24 25
December	31 12	13	5 6	25	56	78	23	27	15	4	8	31	20
1890.													
January	56 0	21	6 30	12 29	74	94	27	34	17	1	14	42	25
February	57 48	21	6 36	3	72	98	16	29	21	12	12	31	19
March	109 18	30	11 12	30	97	115	26	30	11	4	12	30	8
April	144 48	35	12 54	29	102	125	30	32	20	2	12	39	14
May	223 54	46	13 48	21 23 24	116	132	21	39	30	3	10	31	20 24
June	141 24	29	12 18	7	125	139	9	45	29	1	9	23	3
July	139 54	28	12 18	16	123	138	24	49	38	12	9	27	5
August	182 30	41	11 42	17	122	140	4	49	33	31	9	29	16
September	169 30	45	10 30	16	117	130	5	47	31	1	7	28	20
October	121 36	39	10 12	3	94	117	4	36	16	28	8	27	16
November	57 36	21	6 18	9	75	95	1 4	31	15	30	10	36	7
December	0 18	0·1	0 12	7	38	61	7	21	7	23	9	35	5
Total and Means for 1890 ..	1404 36	30	..	..	96	..	..	37	..	..	10	..	..

* As indicated by a Robinson's anemograph, 70 feet above the general surface of the ground.

† Read at 10 A.M., and entered to same day.

Table IV.

Summary of Sun-spot Observations made at the Kew Observatory.

Months.	Days of observation.	Number of new groups enumerated.	Days apparently without spots.
1889.			
October.....	17	1	13
November.....	11	0	11
December.....	9	3	5
1890.			
January	14	2	7
February.....	14	0	14
March.....	18	1	14
April.....	18	1	16
May.....	22	5	10
June	18	1	14
July.....	19	3	8
August	17	3	8
September.....	21	6	3
October.....	17	2	11
November.....	15	2	7
December	1*	*	*
Totals for 1890	194	26	112

* The Sun was only faintly visible on two days during the month.